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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/315,390	05/20/1999	STEPHEN CRANE	9567.4807	6469

7590 09/24/2002

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EXAMINER

ROCHE, LEANNA M

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 09/24/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/315,390

**Applicant(s)**

CRANE, STEPHEN

**Examiner**

Leanna Roche

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --****Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 September 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5,9-11,13-23,25,26 and 29-35 is/are pending in the application.
- 4a) Of the above claim(s) 16-22 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25 and 26 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,9-11,13-15,23 and 29-35 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 06 August 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                              | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)          | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____. | 6) <input type="checkbox"/> Other: _____.                                   |

### **DETAILED ACTION**

1. In an effort to better clarify the invention being claimed, the examiner has deemed it prudent to re-open prosecution on this pending application to broaden and clarify the art rejection of record and to apply 35 USC 112 rejections. Therefore, the amendment filed September 5, 2002 has been entered and carefully considered. Claims 24, 27, 28 and 36 have been cancelled. Claims 1, 11, 23, and 29 have been amended. Claims 16-22 remain withdrawn from consideration. Claims 1, 2, 4, 5, 9-11, 13-15, 23, 25, 26 and 29-35 are pending in this application. The examiner requests that Applicant submit a clean copy of all pending claims.

### ***Drawings***

2. The proposed drawing correction and/or the proposed substitute sheet of drawings, filed on August 6, 2002 has been approved. A proper drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The correction to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 5 is objected to because of the following informalities: in line 1 of Claim 5, delete the term "outer". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 11 and 29 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 11 claims a “deck”, and Claim 29 claims a “boat deck cooler”. The specification does not provide support for a deck or a boat deck cooler.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1, 2, 4, 5, 9-11, 13-15, 23, 29-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 states, “wherein said composite structure comprises a boat deck or hull”. Claim 11 states, “wherein said composite structure comprises a boat, deck”. Claim 23 states, “and said composite structure comprises a boat hull or boat deck”. Claim 29 states, “said composite comprises a boat hull, a boat deck cooler, a cooler or a camper top”. Claim 30 states, “where said composite comprises a boat hull or boat deck”.

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Claim 31 states, "wherein said composite comprises a cooler". Claim 32 states, "wherein said composite comprises a camper top". Claim 33 states, "wherein said composite comprises a boat deck". Claim 34 states, "wherein said composite comprises a boat deck". All of these phrases are considered vague and indefinite because it is unclear how a composite structure may be comprised of a boat deck, boat hull, camper top or cooler. For the purposes of examination, the examiner has read these limitations to mean a boat deck, boat hull, camper top or cooler which is comprised of Applicant's claimed multi-layer composite structure.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1, 4, 5 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Akimoto et al. (USPN 4986860).

Akimoto is directed to a lower foamed sheet on which is laminated a thermoplastic resin surface layer (Column 2 lines 34-39). The lower layer foamed sheet may be comprised of a copolymer of vinyl chloride and acrylic acid (Column 3 lines 14-25). The surface layer is comprised of vinyl chloride modified with an acrylic rubber (Column 5 lines 3-15). The lower layer foamed sheet of Akimoto reads on Applicant's acrylic or acrylic-polyvinylchloride foam core, and the surface layer of Akimoto reads on

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Applicant's acrylic or acrylic-polyvinylchloride outer layer. Akimoto discloses a surface layer and a foamed layer both comprised of vinyl chloride and acrylic. Therefore, Akimoto discloses a composite that avoids the use of styrene. Applicant's claimed boat hulls, decks, camper tops and coolers lack any structural limitations, and Applicant's claims do not specify any rigidity or hardness. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Because Akimoto reads on the material limitations of Claims 1, 4, 5 and 33, Akimoto anticipates the claimed invention.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 2 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. (USPN 4986860) as applied to claim 1 above, and further in view of Steward et al. (USPN 4211590) or Stamper et al. (USPN 4256797)

Akimoto discloses a vehicle trim material without an additional inner acrylic layer attached to the foam core. Steward and Stamper both disclose vehicle trim panels with inner and outer layers attached to a foam core. The additional inner layer would improve the strength of the trim panel and would improve the aesthetic appeal of the

panel. Therefore, it would have been obvious to the skilled artisan at the time this invention was made to have combined the teachings of Akimoto and Steward or Stamper, motivated by the desire to produce a composite vehicle trim material with increased strength and improved aesthetic appeal.

12. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. (USPN 4986860) as applied to claim 1 above, and further in view of Fay (USPN 4053545).

Akimoto discloses the use of an adhesive to bond the surface layer to the lower foam layer. Akimoto does not, however, specifically disclose the use of an acrylic adhesive. Fay discloses the use of an acrylic adhesive to firmly bond an acrylic containing sheet to a foam layer. The acrylic adhesive of Fay sets by the heat produced by the foam formation, which allows for reduced production steps. It would have been obvious to the skilled artisan at the time this invention was made to use an acrylic adhesive as shown by Fay in the composite of Akimoto, motivated by the desire to produce a firm bond between the acrylic films and foam core of the composite while minimizing additional processing steps.

13. Claims 10, 11, 13-15 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akimoto et al. (USPN 4986860) in view of Steward et al. (USPN 4211590) or Stamper et al. (USPN 4256797) as applied to claim 2 above, and further in view of Fay (USPN 4053545), substantially as set forth in Paper No. 13, paragraphs 17.

Akimoto, Steward and Stamper all disclose the use of adhesive to secure the outer acrylic films to the acrylic foam core, but they do not specifically disclose the use of an acrylic adhesive. Fay discloses the use of an acrylic adhesive to firmly bond an acrylic containing sheet to a foam layer. The acrylic adhesive of Fay sets by the heat produced by the foam formation, which allows for reduced production steps. It would have been obvious to the skilled artisan at the time this invention was made to use an acrylic adhesive as shown by Fay in the composite of Akimoto in view of Steward or Stamper, motivated by the desire to produce a firm bond between the acrylic films and foam core of the composite while minimizing additional processing steps.

#### ***Allowable Subject Matter***

14. Claims 25 and 26 are allowed because the prior art does not teach or suggest a composite structure comprising an acrylic foam adhered to an outer layer comprised of acrylic-ABS.

15. Claims 29-32 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

#### ***Response to Arguments***

16. Applicant's arguments filed September 5, 2002 have been entered and fully considered. The addition of the limitation "while avoiding the use of styrene" in independent claims 1, 11, and 23 is sufficient to overcome the previous rejections under



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35 USC 102(b) to Kuwazuru (USPN 4579774), Steward (USPN 4211590), Stamper (USPN 4256797), Honda (USPN 4278728) and Paddock (USPN 4440825).

17. Applicant has made no argument with regard to the rejection under 35 USC 102(b) with regard to Akimoto et al. (USPN 4986860). Applicant has made no arguments with regard to the rejection under 35 USC 103(a) over Akimoto in view of Steward (USPN 4211590) or Stamper (USPN 4256797).

18. However, with regard to Akimoto, Applicant previously contended that Akimoto “specifically teaches styrene, and specifically states that ‘polystyrene is especially preferred’ at column 2, line 35.” However, column 2, line 35 of Akimoto specifically states “polyvinyl chloride with cross-linking for a lower layer”. Additionally, the only mention of styrene in Akimoto is to disclose the possible use of vinyl chloride and styrene copolymers, but no preference is indicated. Because Akimoto teaches numerous embodiments which do not require the use of styrene, Akimoto avoids the use of styrene.

19. Applicant argues that Akimoto is directed to non-rigid foam sheets suitable for an interior trim material particularly for vehicles, and that Applicant’s present invention is directed to other purposes and objects, such as boat hulls, decks, camper tops, and coolers...which can be hard and stiff. However, Applicant’s claimed boat hulls, decks, camper tops and coolers lack any structural limitations, and Applicant’s claims do not specify any rigidity or hardness. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Additionally, a

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recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963). In the present case, Applicant claims a multi-layer composite structure. Akimoto discloses a multi-layer composite structure. Therefore, Akimoto reads on Applicant's claimed invention.

20. With regard to Akimoto in view of Steward or Stamper, in response to applicant's previous argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Because Akimoto, Steward and Stamper are all directed the same art, i.e. to the production of vehicle trim panels, a person of ordinary skill in the art would have found it obvious to combine their teachings to produce vehicle trim composites of greater strength and aesthetic appeal.

21. Applicant relied on previous arguments with regard to the rejections under 35 USC 103(a) over Akimoto in view of Steward or Stamper, further in view of Fay (USPN 4053545) and the rejection under 35 USC 103(a) over Akimoto in view of Fay.

22. With regard to Akimoto in view of Steward or Stamper further in view of Fay, in response to applicant's previous argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In the present case, it has been established that Akimoto, Steward and Stamper all disclose the use of "appropriate" adhesives to produce a tenacious bond between outer film layers and the foam core. Thus, one of ordinary skill in the art must determine what would be considered an "appropriate" adhesive. Fay teaches that an acrylic adhesive provides advantages for bonding an acrylic containing sheet to a containing foam layer. Because Akimoto, Steward and Stamper are all comprised of acrylic containing outer layers adhered to foam layers, it would have been obvious to the skilled artisan at the time this invention was made to use the acrylic adhesive of Fay as the "appropriate" adhesive in the composites Akimoto in view of Steward or Stamper.

23. With regard to Applicant's argument that "soft resilient materials such as a liner for a camper top are not structural composites", this argument is not found persuasive

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because Applicant's argument fails to comply with 37 CFR 1.111(b) because it amounts to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. Applicant is claiming a multi-layer composite structure. Akimoto discloses a multi-layer composite structure. Therefore, Akimoto reads on Applicant's claimed invention.


**Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leanna Roche whose telephone number is 703-308-6549. The examiner can normally be reached on Monday through Friday from 8:30 am to 6:00 pm (with alternate Mondays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
lmr  
September 23, 2002

  
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